

AMENDMENTS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

1. (Currently Amended) A processor, comprising:
a fork predictor to issue a prediction whether a fork instruction should be permitted to execute, wherein said fork predictor includes prediction logic to issue said prediction based upon execution history of speculative threads, wherein said fork predictor includes update logic to receive a first calculated determination whether a first one of said speculative threads was executed desirably, and wherein said first calculated determination is performed by executing an update instruction; and
an execution unit to execute said fork instruction responsive to said prediction.
2. (Canceled)
3. (Currently Amended) The processor of claim-~~2~~1, wherein said prediction logic utilizes local history of said speculative threads.
4. (Currently Amended) The processor of claim-~~2~~1, wherein said prediction logic utilizes global history of said speculative threads.
5. (Canceled)
6. (Currently Amended) The processor of claim-~~5~~1, further comprising a retirement unit to transfer said first calculated determination to said update logic.

7. (Currently Amended) The processor of claim ~~5~~1, wherein said update logic is to receive a second calculated determination whether a second one of said speculative threads would have been executed desirably when said second one of said speculative threads was not executed.

8. (Canceled)

9. (Currently Amended) The processor of claim ~~8~~1, wherein said update instruction is part of a join instruction.

10. (Currently Amended) A method, comprising:
predicting whether a speculative thread will be desirable;
conditionally forking to initiate said speculative thread responsive to said predicting;
determining whether said speculative thread was desirable; ~~and~~
updating state performing said predicting with results of said determining; and
testing whether a processor supports said conditional forking.

11. (Canceled)

12. (Original) The method of claim 10, further comprising joining said speculative thread and a master thread when said speculative thread and said master thread are both complete.

13. (Original) The method of claim 12, wherein said joining is performed with said updating.

14. (Original) The method of claim 10, wherein said determining includes determining whether a non-executed speculative thread would have been desirable.

15. (Original) The method of claim 10, wherein said results include a local history information.

16. (Original) The method of claim 10, wherein said results include a global history information.

17. (Original) The method of claim 10, further comprising initiating a recovery if said determining shows that said speculative execution was not successful.

18. (Currently Amended) A system, comprising:
a processor including a fork predictor to issue a prediction whether a fork instruction should be permitted to execute and an execution unit to execute said fork instruction responsive to said prediction, wherein said fork predictor includes an update logic to receive a first calculated determination whether a first one of said speculative threads was executed desirably, and wherein said first calculated determination is performed by executing an update instruction;

a chipset coupled to said processor to convey input-output data from an input-output peripheral; and

an input-output peripheral including an audio input-output device.

19. (Original) The system of claim 18, wherein said fork predictor includes a prediction logic to issue said prediction based upon execution history of speculative threads.

20. (Original) The system of claim 19, wherein said prediction logic utilizes local history of said speculative threads.

21. (Original) The system of claim 19, wherein said prediction logic utilizes global history of said speculative threads.

22. (Canceled)

23. (Currently Amended) The system of claim-~~22~~19, further comprising a retirement unit to transfer said first calculated determination to said update logic.

24. (Currently Amended) The system of claim-~~22~~19, wherein said update logic is to receive a second calculated determination whether a second one of said speculative threads would have been executed desirably when said second one of said speculative threads was not executed.

25. (Canceled)

26. (Currently Amended) The system of claim-~~25~~19, wherein said update instruction is part of a join instruction.

27. (Currently Amended) A processor, comprising:
means for predicting whether a speculative thread will be desirable;
means for conditionally forking to initiate said speculative thread responsive to said predicting;
means for determining whether said speculative thread was desirable; ~~and~~

means for updating state performing said predicting with results of said determining; and

means for testing whether a processor supports said conditional forking.

28. (Canceled)

29. (Original) The processor of claim 27, further comprising means for joining said speculative thread and a master thread when said speculative thread and said master thread are both complete.

30. (Original) The processor of claim 29, wherein said means for joining is included in said means for updating.

31. (Original) The processor of claim 27, wherein said means for determining includes means for determining whether a non-executed speculative thread would have been desirable.